



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038437

Supplier: MOA001-VU
Monroe Aerospace
399 East Drive
Melbourne, FL 32904 USA
Phone: 1-321-727-0047
Fax: 1-321-727-7331

PO No: PO038437
PO Date: 11/21/17
Due Date: 11/24/17
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items											
Line Item	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	AN4-12	✓	Bolt ✓		Firmed	11/24/17	100 Ea	0 Ea	100 Ea	\$0.4961/Ea	\$49.61
2	MS24693-S49	✓	Screw ✓		Firmed	11/24/17	50 Ea	0 Ea	50 Ea	\$0.05/Ea	\$2.50
3	MS24665-151	✓	Cotter Pin ✓		Firmed	11/24/17	100 Ea	0 Ea	100 Ea	\$0.0319/Ea	\$3.19
4	MS24665-300	✓	Cotter Pin ✓		Firmed	11/24/17	100 Ea	0 Ea	100 Ea	\$0.0409/Ea	\$4.09
5	AN3-3A	✓	Bolt ✓		Firmed	11/24/17	300 Ea	0 Ea	300 Ea	\$0.70/Ea	\$210.00
6	AN526C832R8	✓	Screw ✓ receive ea		Firmed	11/24/17	100 Ea	0 Ea	100 Ea	\$0.075/Ea	\$7.50
7	AN526C832R9	✓	Screw ✓		Firmed	11/24/17	100 Ea	0 Ea	100 Ea	\$0.06/Ea	\$6.00
8	AN5-30A	✓	Bolt ✓		Firmed	11/24/17	30 Ea	0 Ea	30 Ea	\$0.607/Ea	\$18.21
9	AN5-32A	✓	Bolt ✓		Firmed	11/24/17	75 Ea	0 Ea	75 Ea	\$0.6814/Ea	\$51.11
10	AN6-13A	✓	Bolt ✓		Firmed	11/24/17	40 Ea	0 Ea	40 Ea	\$0.5004/Ea	\$20.02
Grand Total:										\$372.22	

Order Notes

Procurement Quality Clauses
A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A032 PUBLIC LAW 101-592 FASTENER QUALITY ACT
A033 STATEMENT OF CONFORMITY/TEST RECORDS FOR NAS, AN and MS FASTENERS
A040 NOTIFICATION OF QUALITY ESCAPE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS
A048 COUNTERFEIT-PARTS-AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
PO038437

Order Notes

A049 SUPPLIER AWARENESS

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/21/17 2:38 PM dart.baker.diane



MONROE TAX ID: 47-3784072

Invoice

INVOICE #: 620067
DATE PRINTED: 11/22/2017
TIME: 1:24:15 PM
OF ITEMS: 11
PAGE: 1

TO: DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

ATTN: DIANE BARKER
Ph: 613.632.3336

SHIP TO: DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

INVOICE DATE: 11/22/2017 TERMS: NET 30 WEIGHT: 17 SHIP VIA: UPS GROUND
ORDER DATE: 11/21/2017 CUST PO: PO038437 # OF BOXES:
SHIP DATE: 11/22/2017 FOB: MELBOURNE, FL SHIPMENT #: 0
SALES ORDER #: 548742 YOUR MONROE ACCOUNT REP: Luis Sepulveda
CUSTOMER #: 16754 AWB: 1Z3165E06856242851

ITEM	PART NUMBER/DESCRIPTION	SHIPPED	B/O	CD	UNIT PRICE	UOM	TOTAL AMT
1	AN4-12 BOLT DRILLED ECCN#: 9A991 SCHB#: 7318.15.2000 MFR: AIRFASCO LOT:25601 REV: 3	100.00	0.00	NE	0.4961	EA	\$49.610
2	MS24693S49 FLAT HEAD SCREW ECCN#: 9A991 SCHB#: 7318.15.4000 MFR: GENIE LOT:14-170	50.00	0.00	NE	0.0500	EA	\$2.500
3	MS24665-151 COTTER PIN S/S ECCN#: 9A991 SCHB#: 7318.16.0060 MFR: WESTERN WIRE LOT:DSS110514A-4	100.00	0.00	NE	0.0319	EA	\$3.190
4	MS24665-300 COTTER PIN S/S ECCN#: 9A991 SCHB#: 7318.16.0060 MFR: W.WIRE LOT:CDMS090616A-4	100.00	0.00	NE	0.0409	EA	\$4.090
5	AN3-3A BOLT UNDRILLED ECCN#: 9A991 SCHB#: 7318.15.2000 MFR: AFC LOT:25531 REV: 3	300.00	0.00	NE	0.7000	EA	\$210.000
6	AN526C832R8 TRUSS HEAD SCREW ECCN#: 9A991 SCHB#: 7318.15.2091 MFR: MAC LOT:83800 REV: 6	100.00	0.00	NE	0.0750	EA	\$7.500

SPR-1130

SPECIAL INSTRUCTIONS:

We Thank You For Your Continued Business!

ECAS, LLC dba MONROE AEROSPACE

399 EAST DRIVE MELBOURNE, FL 32904 PH: 800.330.3975 FAX: 321.727.7331



MONROE TAX ID: 47-3784072

Invoice

INVOICE #: 620067
DATE PRINTED: 11/22/2017
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OF ITEMS: 11
PAGE: 2

TO: DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

ATTN: DIANE BARKER
Ph: 613.632.3336

SHIP TO: DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

INVOICE DATE: 11/22/2017 TERMS: NET 30 WEIGHT: 17 SHIP VIA: UPS GROUND
ORDER DATE: 11/21/2017 CUST PO: PO038437 # OF BOXES:
SHIP DATE: 11/22/2017 FOB: MELBOURNE, FL SHIPMENT #: 0
SALES ORDER #: 548742 YOUR MONROE ACCOUNT REP: Luis Sepulveda
CUSTOMER #: 16754 AWB: 1Z3165E06856242851

ITEM	PART NUMBER/DESCRIPTION	SHIPPED	B/O	CD	UNIT PRICE	UOM	TOTAL AMT
7	AN526C832R9 TRUSS HEAD SCREW ECCN#: 9A991 SCHB#: 7318.15.2091 MFR: CRESCENT LOT:84134	100.00	0.00	NE	0.0600	EA	\$6.000
8	AN5-30A BOLT UNDRILLED ECCN#: 9A991 SCHB#: 7318.15.2000 MFR: AFC LOT:11125 REV: 1	30.00	0.00	NE	0.6070	EA	\$18.210
9	AN5-32A BOLT UNDRILLED ECCN#: 9A991 SCHB#: 7318.15.2000 MFR: AFC LOT:15137	75.00	0.00	NE	0.6814	EA	\$51.110
10	AN6-13A BOLT UNDRILLED ECCN#: 9A991 SCHB#: 7318.15.2000 MFR: AFC LOT:25482 REV: 3	40.00	0.00	NE	0.5004	EA	\$20.020

*** Order Complete ***

SEP 11-20

SPECIAL INSTRUCTIONS:

We Thank You For Your Continued Business!

SUB TOTAL:	\$372.230
TAX TOTAL:	\$0.000
MISC CHARGE:	\$0.000
FREIGHT:	\$44.010
TOTAL:	\$416.24
	USD

**PACKING SLIP**

INVOICE #: 620067
DATE PRINTED: 11/22/2017
TIME: 1:24:38 PM
OF ITEMS: 10
PAGE: 1

TO: DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

ATTN: DIANE BARKER
Ph: 613.632.3336

SHIP TO: DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

INVOICE DATE: 11/22/2017

TERMS: NET 30

WEIGHT: 17

SHIP VIA: UPS GROUND

ORDER DATE: 11/21/2017

CUST PO: PO038437

OF BOXES:

SHIP DATE: 11/22/2017

FOB: MELBOURNE, FL

SHIPMENT #: 0

SALES ORDER #: 548742

CUSTOMER #: 16754

AWB: 1Z3165E06856242851

YOUR MONROE ACCOUNT REP: Luis Sepulveda

ITEM	PART NUMBER/DESCRIPTION	SHIPPED	B/O	CD	UNIT PRICE	UOM
1	AN4-12 BOLT DRILLED MFR: AIRFASCO LOT: 25601 REV: 3 Control #: 155334-3	100.00	0.00	NE		
2	MS24693S49 FLAT HEAD SCREW MFR: GENIE LOT: 14-170 Control #: 137853-5	50.00	0.00	NE		
3	MS24665-151 COTTER PIN S/S MFR: WESTERN WIRE LOT: DSS110514A-4 Control #: 141224-4	100.00	0.00	NE		
4	MS24665-300 COTTER PIN S/S MFR: W.WIRE LOT: CDMS090616A-4 Control #: 158385-1	100.00	0.00	NE		
5	AN3-3A BOLT UNDRILLED MFR: AFC LOT: 25531 REV: 3 Control #: 155263-1	300.00	0.00	NE		

SPECIAL INSTRUCTIONS:

We Thank You For Your Continued Business!

MONROE TAX ID: 47-3784072

ECAS, LLC dba MONROE AEROSPACE

399 EAST DRIVE MELBOURNE, FL 32904 PH: 800.330.3975 FAX: 321.727.7331



CERTIFICATE OF CONFORMITY

NO: 620067

BILL TO:
DART AEROSPACE LTD.
ACCTS. PAYABLE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

SHIP TO:
DART AEROSPACE LTD.
ATTN: RECEIVING
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7

CUSTOMER PO	SHIP DATE	AIRWAY BILL/TRACKING #
PO038437	11/22/2017	1Z3165E06856242851

PART NO:	Description	CND	QTY	S/L	
AN4-12 REV: 3	BOLT DRILLED	NE	100	29	LOT: 25601 MFR: AIRFASCO
MS24693S49	Customer Reference: FLAT HEAD SCREW	NE	50	39	LOT: 14-170 MFR: GENIE
MS24665-151	Customer Reference: COTTER PIN S/S	NE	100	71	LOT: DSS110514A-4 MFR: WESTERN WIRE
MS24665-300	Customer Reference: COTTER PIN S/S	NE	100	61	LOT: CDMS090616A-4 MFR: W.WIRE
AN3-3A REV: 3	BOLT UNDRILLED	NE	300	59	LOT: 25531 MFR: AFC
AN526C832R8 REV: 6	TRUSS HEAD SCREW	NE	100	62	LOT: 83800 MFR: MAC
AN526C832R9	Customer Reference: TRUSS HEAD SCREW	NE	100	18	LOT: 84134 MFR: CRESCENT
AN5-30A REV: 1	BOLT UNDRILLED	NE	30	18	LOT: 11125 MFR: AFC
AN5-32A	Customer Reference: BOLT UNDRILLED	NE	75	20	LOT: 15137 MFR: AFC
AN6-13A REV: 3	BOLT UNDRILLED	NE	40	29	LOT: 25482 MFR: AFC
	Customer Reference:				

CONDITIONS: NE - New OH-OVERHAULED RP-REPAIRED SV-SERVICEABLE

We hereby certify that the items that are a part of this Purchase Order have been visually & dimensionally found to conform to all applicable standards, drawings & specifications. The liability of ECAS, LLC is limited to replacement of any item which is rejected because of a defect in material or workmanship if notified within 30 days & liability shall not exceed the invoice value. Such replacement shall constitute satisfaction of all liability.

SIGNED:

For and on behalf of ECAS, LLC dba MONROE AEROSPACE

ECAS, LLC dba MONROE AEROSPACE
399 EAST DRIVE MELBOURNE, FL 32904 PH: 800.330.3975



2655 Harrison Ave SW
Canton, OH 44706
Ph. 330-430-6190, Fax: 330-430-6199

Packing Slip

Original

Invoice #: 150108

Invoice Date: 4/30/2017

Time: 1:59:55 PM

Page: 1

To:

ECAS, LLC
399 EAST DR
MELBOURNE, FL 32904
USA
ATTN: GARY MIRAGLIA
Ph: 321-727-0047 Fax: 321-727-7331

Ship To:

ECAS, LLC
399 EAST DR
MELBOURNE, FL 32904

[Handwritten signature]

6/8/2017

Cust. PO#: FL79646

Order Date: 5/31/2017

Prepared By:

Customer #: 13570

Buyer: GARY MIRAGLIA

WO #:

Terms: NET 30

of Items: 6

Sales Order: 123547

VAT #:

FOB:

Ship Via: UPS FREIGHT COLLSHIP Via Acc: 3165E0

of Boxes: 10

Ship Log #: 1

Cust VAT #:

AWB:

Weight: 388

Ship Order:

Ship Date: 6/2/2017

Shipment:

Item	Part Number/Description	Shipped	BackOrd	CD	List Price	Disc	Unit Price	UOM	Total Amt
1	AN10-15A BOLT, AN Loc/Whse: BINBOX Control #: 152900-1 L-24949 DFAR TEST REPORTS	2	0	NE				EA	
2	AN4-7 BOLT, AN Loc/Whse: BIN BOX Control #: 17159-2 L-24543 DFAR TEST REPORTS	2500	0	NE				EA	
3	AN4-6 BOLT, AN Loc/Whse: 3A4 Control #: 153426-1 L-24837 DFAR TEST REPORT	2500						EA	
4	AN4-12 BOLT, AN Loc/Whse: 5F2 Control #: 154403-1 L-25601 DFAR TEST REPORTS	500						EA	

C OF C ENCLOSED
10 BOXES 388 LBS
PARTS ARE MANUFACTURED IN THE USA!!
THANK YOU!

Special Instructions:

Authorized Signature:

*Certs.
PO 038437
Monroe.*



2655 Harrison Ave SW
Canton, OH 44706
Ph: 330-430-6190, Fax: 330-430-6199,

Packing Slip Original

Invoice #: 150108

Invoice Date: 4/30/2017

Time: 1:59:56 PM

Page: 2

To:
ECAS, LLC
399 EAST DR
MELBOURNE, FL 32904
USA
ATTN: GARY MIRAGLIA
Ph: 321-727-0047 Fax: 321-727-7331

Ship To:
ECAS, LLC
399 EAST DR
MELBOURNE, FL 32904

Cust. PO#: FL79646

Terms: NET 30

Ship Via: UPS FREIGHT COLL Ship Via Acc: 3165E0

Order Date: 5/31/2017

of Items: 6

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Weight: 388

Prepared By:

Sales Order: 123547

Ship Log #: 1

Ship Order:

Customer #: 13570

VAT #:

Cust VAT #:

Ship Date: 6/2/2017

Buyer: GARY MIRAGLIA

FOB:

AWB:

Shipment:

WO #:

Item	Part Number/Description	Shipped	BackOrd	CD	List Price	Disc	Unit Price	UOM	Total Amt
5	AN4-12A BOLT, AN Loc/Whse: 3B3 3D7 Control #: 154600-1 L-26390 DFAR TEST REPORT ACCEPTED	5000	0	NE				EA	
6	AN4-11 BOLT, AN Loc/Whse: 3A4 Control #: 17161-2 L-24774 DFAR TEST REPORT DFAR TEST REPORT-EMAIL ACCEPTED	2500	0	NE				EA	

C OF C ENCLOSED
10 BOXES 388 LBS
PARTS ARE MANUFACTURED IN THE USA!!
THANK YOU!

Special Instructions:

Authorized Signature:



2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 02/12/16

PART NO.: AN4-12 per NASM4-12 rev.3

AFC LOT NO.: 25601

QTY MFG.: 24,700

PROCUREMENT SPECIFICATION: Produced per NASM 6812

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: 171211

PROCUREMENT SPECIFICATION: Heat Treat per AMS 2759

PLATING

VENDOR: Cleveland Plating

CERTIFICATION NO.: 504554

PROCUREMENT SPECIFICATION: Cadmium Plate per AMS-QQ-P-416 D, Type II, Class 2

MATERIAL

MILL: Charter

COUNTRY OF MELT: USA

HEAT: 20330290

GRADE SPECIFICATION: Alloy Steel per AMS 6300 E, Type 4037, .312"

4037 MATERIAL CHEMISTRY											
ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.350	.760	.008	.002	.200	.040	.060	.220	.080	.044	

PHYSICAL PROPERTIES				
PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	4,080 lbs.	3,130 lbs.	3,680 lbs.	HRC 26-32
ACTUAL	6,278lbs.	5,025 lbs.	4,331 lbs.	HRC 29-30

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

QS-082
REV 0
2/15

Airfasco Industries
Quality Assurance Representative:


T. West

**2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199**

CERTIFICATE OF CONFORMANCE

ECAS

I Hereby Certify that on **06/02/17** Airfasco Industries provided the supplies called for by Contract/ PO Number **FL79646** in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7009 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.

Quality Assurance Representative


WM. DENT

[illegible]



**CHARTER
STEEL**

A Division of
Charter Manufacturing Company, Inc.

LOAD

1658 Cold Springs Road
Saukville, Wisconsin 53080
(262) 268-7400
1-800-437-0789
Fax (262) 268-2570

CHARTER STEEL TEST REPORT

Melted in USA Manufactured in USA

**Kreher Steel Co - Melrose Park
1550 N. 25th Ave.
Melrose Park, IL 60160**

Cust P.O.	40081
Customer Part #	317131
Charter Sales Order	70053178
Heat #	20330290
Ship Lot #	2067309
Grade	4037 X SK FG RHO 5/16
Process	HR
Finish Size	5/16
Ship date	18-JUN-14

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed below and that it satisfies these requirements. The recording of false, fictitious and fraudulent statements or entries on this document may be punishable as a felony under federal statute.

Test results of Heat Lot # 20330290

Lab Code: 125544

CHEM
%WT

C	MN	P	S	SI	NI	CR	MO	CU	SN	V
.35	.76	.008	.002	.200	.04	.06	.22	.06	.006	.002
AL	N	B	TI	CA	NB					
.044	.0060	.0003	.001	.0015	.004					

JOMINY(HRC)

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10
54	51	45	34	28	24	23	22	22	21
J01.5MM	J02MM	J03MM	J07MM	J09MM	J11MM	J13MM	J15MM		
54	51	41	33	26	24	22	21		

JOMINY SAMPLE TYPE ENGLISH-C
JOMINY SAMPLE TYPE METRIC-C

Test results of Rolling Lot # 2067309

REDUCTION RATIO=637:1

Specifications:

Manufactured per Charter Steel Quality Manual Rev Date 9/12/13
Meets customer specifications with any applicable Charter Steel exceptions for the following customer documents:
Customer Document = MATERIAL SPECIFICATION Revision = 2 Dated = 13-SEP-11

Additional Comments:

Charter Steel
Cuyahoga Heights, OH, USA

Rem: Load1, Fax0 Mail0



This MTR supersedes all previously dated MTRs for this order

Janice Barnard
Janice Barnard
Manager of Quality Assurance
Printed Date : 08/16/2014

Page 1 of 2



A DIVISION OF J.T. ADAMS CO., INC.

4520 WILLOW PARKWAY
CLEVELAND, OHIO 44125
PHONE (216) 641-3290
FAX (216) 641-1223
www.tensile.com

CERTIFIED TEST REPORT

Airfasco Industries Inc.
2655 Harrison Ave. SW
Canton OH 44706

Job No.: B4-290-395
Date: 10-23-14
Cust. PO#: 61344

Description: 1 sample Mill: Charter Country of Melt: USA
Material: 4037 Heat# 20330290
Spec: AMS 6300E

TEST RESULTS

Product Analysis of Elements in % (OES per TTML C-01D):

	<u>Actual</u>	<u>Requirements</u>
Carbon	0.38	0.35-0.40
Manganese	0.76	0.70-0.90
Phosphorus	0.008	0.035 Max.
Sulfur	0.001	0.040 Max.
Silicon	0.19	0.15-0.35
Chromium	0.05	N/A
Nickel	0.04	N/A
Molybdenum	0.21	0.20-0.30
Columbium	0.002	N/A
Aluminum	0.050	N/A
Copper	0.09	N/A
Vanadium	<0.001	N/A
Titanium	0.002	N/A

The above conforms to specifications listed.


Authorized Agent



Page 1 of 1

This Report May Not Be Reproduced Except in Full

This report represents Tensile Testing interpretation of the results obtained from the test and is not to be construed as a Warranty or Warranty of the condition of the materials tested. Tensile Testing shall not be held liable for misinterpretation of conditions, loss, damage, injury or death arising from or attributable to delay preceding a test or subsequent to performance of a test.

BRITE METAL

CERTIFICATION OF PROCESS

CUSTOMER: AIRFASCO INDUSTRIES, INC.
2655 HARRISON AVE SW
CANTON OH 44706

THIS IS TO CERTIFY THAT BRITE METAL INC. HAS PROCESSED THE FOLLOWING MATERIAL IN ACCORDANCE WITH THE MOST WIDELY ACCEPTED METALLURGICAL PROCEDURE.

PO #: 62427 **WEIGHT:** 563 **NO. BINS:** 0 **NO. PCS:** 24,700

PN#: AN4-12 **LOT#:** 25601 **MATERIAL#:** 4037

BM ORDER NO: 171211 **CORE HARD SPECS:** HRC 28-32

PROCESS TO: AMS 2759

DATE RECEIVED: 01/07/16 **DATE SHIPPED:**

HEAT TREATING TEST RESULTS

CORE HARDNESS: _____ **RC 29 / 30**

SURFACE HARDNESS: _____ **RC 29 / 30 @.003**

CASE DEPTH: _____ **N/A**

CORE HARDNESS AS QUENCHED: _____ **N/A**

INSPECTOR: _____ **SK**

DATE: _____ **1-18-16**

**CLEVELAND PLATING, LLC
TEST CERTIFICATION**

CUSTOMER: AIRFASCO INC
AIRFASCO INC
2655 HARRISON AVE SW
CANTON, OH 44706

ORDER #: 62478

FINISHED PRODUCT DESCRIPTION

AIRFASCO PART#: AN4-12
CAD YELLOW .0003
AMS-QQP-416D TY 2 CLASS 2
CERTIFICATION FOR PROCESS

CERTIFICATION DATE: 02/11/16

LOT #: 25601

CP #: 504554

SAMPLING PLAN: Per Cleveland Plating Control Plan, Section 1.5 based on ASME/ANSI B 18.18.4M

Lot Size: 24,700 pcs. - 566 lbs. Number of Pieces Tested: 12

COATING THICKNESS: Tested in accordance with ASTM E376

Average = .00031 IN.

CORROSION RESISTANCE: Chamber operated in accordance with ASTM B117

Processed to Meet (to comply with salt spray test)

Tested* (*In the event of a failure, customer will be contacted to begin isolation and containment)

**ALL PARTS SAMPLED AND TESTED AFTER FINISHING EXCEPT AS FOLLOWS:
STRESS RELIEF/HYDROGEN EMBRITTLEMENT RELIEF:**

Pre-Bake Temperature (F):	FOR	HRS
Post Bake Temperature (F):	FOR	HRS

The purchase order stated above was processed in accordance with Cleveland Plating's QA Manual Rev 01.
A sample of the above material has passed the tests required by the purchase order and conforms to the listed
finishing specification. This certification shall not be reproduced without the approval of Cleveland Plating, LLC.

APPROVED BY:

1028 East 134th Street - Cleveland, OH 44110 - PH (216) 249-0300 - FAX (216) 249-0303
www.clevelandplating.com

AIRFASCO Industries

2655 Harrison Avenue SW Canton, OH 44706

Nondestructive Testing Certification Wet Fluorescent Magnetic Particle Inspection Technique

Part Data

Part Number	Lot Number	Dimensions	Part Description
AN4-12	25601	.2500-28 x 1.281	BOLT-MACHINE, AIRCRAFT

Reference Data

Specification	Procedure Number	Acceptance Criteria
ASTM E1444	MT-1	No Cracks, NASM 6812

Inspection Equipment Data

Model Number	Manufacturer	Serial Number
H-800 Retro	Magnaflux Corporation	91R00150

Inspection Material Data

Particles	Mfr	Batch No.	Carrier	Mfr	Batch No.
14A	Magnaflux	10G078	MG II	Magnaflux	14B056

Technique Data

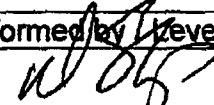
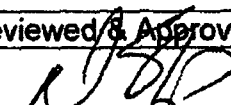
Type Current	Circular Field		Longitudinal Field	
	Headshot Amps	Central Conductor Amps	Coil shot Amps	Coil Turns
FWDC	170	N/A	1540	5

Particle application by the flow method, continuous technique
Demagnetization performed by the AC Coil method, Residual field +/- 2

Inspection Results

Lot Size	Inspection Sample Size	Quantity accepted	Quantity rejected
24700	50	50	0

Notes:

Performed by Level	Reviewed & Approved by:	Date
		2/12/16
D. SHOUP ASNT NDT LIII#176608	D. SHOUP ASNT NDT LIII#176608	



CUST PO NO
FL78557
SO NO
544437
FROM: 800 CLEARWATER LOOP
BILD INDUSTRIES, INC. POST FALLS, ID 83854



2/9/17
CUST PO NO
FL78557
SO NO
544437
FROM: 800 CLEARWATER LOOP
BILD INDUSTRIES, INC. POST FALLS, ID 83854



CUST PO NO
FL78557
SO NO
544437
FROM: 800 CLEARWATER LOOP
BILD INDUSTRIES, INC. POST FALLS, ID 83854

SHIP TO

EAST COAST AVIATION SUPPLIES
399 EAST DRIVE
MELBOURNE FL 32904

SHIP TO

EAST COAST AVIATION SUPPLIES
399 EAST DRIVE
MELBOURNE FL 32904

CUSTOMER BILL TO ADDRESS

COMPLETE CUSTOMER PO NO.

BILL TO NO.

SHIP TO NO.

PAGE

FL78557

ECA001

BUYER NAME & PHONE NO.

VICKI

EAST COAST AVIATION SUPPLIES
399 EAST DRIVE
MELBOURNE FL 32904

PACKING SLIP
INSPECT IMMEDIATELY

LINE	LOC	QTY ORDERED	TOTAL QTY SHIPPED THIS ORDER	LOT	CUST. PO NO.	CUST. NO.	DESCRIPTION
1		500	500	AN4C22A REV 3	FL78557	ECA001	BOLT BX1=
2		1	1	FULL CERTS ACCEPTED	FL78557	ECA001	CERTIFICATION
3		150000	50000	AN526C832R8 REV 4	FL78557	ECA001	SCREW BX2-6=
4		1	1	FULL CERTS	FL78557	ECA001	CERTIFICATION
5		1	1	FULL CERTS	FL78557	ECA001	CERTIFICATION
6		500	500	AN175-11A REV 7	FL78557	ECA001	BOLT BX7=
7		1	1	FULL CERTS	FL78557	ECA001	CERTIFICATION
8							

Thank you for your order

CERTIFICATION OF CONFORMANCE

WE HEREBY CERTIFY THAT THE MERCHANDISE INCLUDED ON THIS PACKING LIST IS IN CONFORMANCE WITH AN-MS-NAS OR APPLICABLE SPECIFICATIONS AND OR DRAWINGS.

CAGE CODE 31222

DATE

FEB 02 2017

QUALITY CONTROL MANAGER

DATE SHIPPED

SHIPPED VIA

SIGNATURE - MERCHANDISE RECEIVED

TOTAL WT

NO CTNS

P = PARTIAL
C = COMPLETE
CC = CONSIDER COMPLETE
CX = CANCEL

X

MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA, KANSAS 66067

**CERTIFICATE OF CONFORMANCE
AND
MANUFACTURER'S AFFIDAVIT**

CUSTOMER BILD INDUSTRIES

PO: 89212

PART NUMBER: AN526C832R8

REV: 6

LOT NUMBER: 83800

MANUFACTURED QUANTITY: 172,000

MILL HEAT NUMBER: W8A5

COUNTRY OF ORIGIN: UNITED STATES OF AMERICA

DFARS 252.225.7009 Compliant

MERCURY FREE CERTIFICATION

MacFasteners certifies that the parts referenced in the above lot number
do not contain Mercury or Mercury compounds, and were
manufactured in a Mercury free environment.

We certify that the parts furnished against the above referenced purchase order were manufactured by MAC
FASTENERS within the United States, and were processed in accordance with all applicable drawings and
specifications. Objective evidence of compliance is on file, subject to examination upon request.

Mac Fasteners is a DISC QSLM approved Manufacturer - CAGE Code 0RFT4
Mac Fasteners is an Airbus approved Supplier - 203399

DATE: 07/28/16



QUALITY ASSURANCE REPRESENTATIVE

Mac Fasteners
A TriMas Aerospace Company
1110 E. Enterprise
Ottawa, KS 66067

TEST REPORT AND PROCESS CERTIFICATION

CUSTOMER BILD INDUSTRIES		PO NUMBER 89212	PO Date 02/04/16	CERT DATE 07/28/16
PART NUMBER AN526C832R8	REV 6	PART TYPE SCREW, MACHINE, TRUSS HEAD		
LOT NO 83800	MFG QUANTITY 172,000	PROCUREMENT SPEC NASM6812 REV 3		

RAW MATERIAL IDENTIFICATION (Mill Cert Attached)

MATERIAL / MATERIAL SPECIFICATION 302 PER ASTM A493	MILL HEAT NUMBER W8A5	SUPPLIER CENTRAL WIRE
---	---------------------------------	---------------------------------

MECHANICAL TEST RESULTS - TESTING PER NASM1312

ULTIMATE TENSILE STRENGTH POUNDS / PSI
980
1,400
1,390
1,350
1,380
MIN. REQ. 660

DOUBLE SHEAR STRENGTH POUNDS / PSI
NOT REQUIRED
MIN. REQ.

Fatigue Test Sample	<input type="checkbox"/> Accept
NOT REQUIRED	
Stress Durability	<input type="checkbox"/> Accept
External Load Method	
Load	Hours

Magnetic Particle Inspection per ASTM E1444	
Sample Insp	<input type="checkbox"/> 100% Insp <input type="checkbox"/> Accept
Liquid Penetrant Inspection per ASTM E1417	
Sample Insp	<input type="checkbox"/> 100% Insp <input type="checkbox"/> Accept

Magnetic Permeability ASTM A342 Less than 2.0 <input checked="" type="checkbox"/> Accept	
Head Marking	<input checked="" type="checkbox"/> Accept
Recess Torque	In/lbs <input type="checkbox"/> Accept

METALLURGICAL EXAMINATION		NOT REQUIRED	
Discontinuities	<input type="checkbox"/>	Carb/Decarb	<input type="checkbox"/>
Grain Flow	<input type="checkbox"/>	Microstructure	<input type="checkbox"/>
Grain Size	<input type="checkbox"/>	Workmanship	<input type="checkbox"/>
Thread Inspection FED-STD-H28/20 - ASME B1.3		System 21	<input type="checkbox"/> System 22 <input type="checkbox"/> System 23 <input type="checkbox"/>

FINISH / PROCESSOR: Detray Plating Works	
Cadmium Plate	<input type="checkbox"/>
Passivate	<input checked="" type="checkbox"/>
AMS2700	METHOD 1 CLASS 4

HEAT TREAT PROCESSOR: NOT REQUIRED	
SPECIFICATION:	
REQUIREMENT:	
RESULTS: SAMPLE SIZE:	

TEST CERTIFICATION

WE CERTIFY THAT THE PART NUMBER, LOT NUMBER, AND SAMPLES REFERENCED ABOVE HAVE BEEN PROCESSED AND TESTED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATION FOR THE TESTS REPORTED HEREIN. THIS CERTIFICATION SHALL NOT BE RE-PRODUCED, EXCEPT IN FULL, WITHOUT THE APPROVAL OF MAC FASTENERS, INC.


Quality Assurance Representative

PERTH, ON
ERIN, ON
DUMAS, AR
LANCASTER, SC
ROTTERHAM, UK

619-267-3762 FAX 613-267-6817
619-633-8532 FAX 518-833-2218
870-382-2980 FAX 870-382-8988
803-283-3383 FAX 803-283-6301
44-1709-378825 FAX 44-1709-537099



FOND DU-LAC, WI
UNION, IL
PERRIS, CA
HOUSTON, TX
MILTON, FL

920-928-0809 FAX 920-928-0852
815-823-2131 FAX 815-823-2125
851-887-2106 FAX 851-843-6081
800-325-6881 FAX 281-844-8932
880-883-9928 FAX 880-883-8338

THE LEADING MANUFACTURER OF STAINLESS STEEL AND NICKEL ALLOY WIRE PRODUCTS
EXECUTIVE OFFICES: PERTH, ON CANADA - EMAIL: sales@centralwire.com

CENTRAL WIRE
8809 OLSON ROAD
TEL: 818-923-2131

UNION, IL 80185-8730
FAX: 815-823-2125

CERTIFICATE OF CONFORMANCE

SOLD
TO

RIVER VALLEY TOOL & MFG INC
c/o MAC FASTENERS, INC.
1110 ENTERPRISE
OTTAWA KB 66067
USA

SHIP
TO

MMAC FASTENERS INC.
RIVER VALLEY PLANT
260 AIRPORT INDUSTRIAL ROAD
PARIS AR 72855
USA

CUSTOMER'S PO NO.	TYPE OF CERT	CUSTOMER	ORDER NO.	WORK ORDER	DATE SHIPPED
126723	Customer	125370	1213682	1 4182201	3/10/16
SPECIFICATIONS: ASTM-A-493-95 (2004)					

ITEM DESCRIPTION		
DESCRIPTION	SPEC. CLASS	HEAT
Cold Heading 302HQ SKIN PASSED Satin .1420 Coils Std. Techcote	Melt mill NAS Country of origin USA	UCUM - lbs W825
	QTY SHIP 2144	044

CHEMICAL ANALYSIS						
C .009	MN 1.64	SI .23	P .029	S .0021	CR 17.51	NI 9.47
MO .31	CU 3.32	CO .17	N .034	AL .0025		

MECHANICAL PROPERTIES							
AS SHIPPED PROPERTIES:							
TENSILE 83.000 KSI MIN	TENSILE 85.000 KSI MAX						
AFTER HEAT TREAT PROPERTIES:							

* WIRE IS DEARS 252.235-7009 COMPLIANT *
PART # 88302-145

The material as shipped is free from mercury contamination. I certify the chemical analysis and physical and mechanical test results reported above are correct as contained in the records of the company.

Very truly yours,

AUTHORIZED SIGNATURE

DE TRAY Plating Works

Specialized Electro-Plating and Polishing
Nickel
Copper
Decorative Chrome
Satin Chrome
Zinc
Cadmium
Passivate
Bright Dip
Strip Copper
Descale

10405 EAST ELEVENTH STREET • INDEPENDENCE, MISSOURI 64052
Phone (816) 252-8411 Fax (816) 252-8527 • E-mail : DeTrayPlating@Aol.com

CUSTOMER: Mac Fasteners Lot#: 83800
PART NUMBER: AN526C832R8
PROCUREMENT SPECIFICATION: n/a
OTHER CONTRACTURAL REQUIREMENTS:
MATERIAL: 302
QUANTITY: 655 lbs
INVOICE NUMBER: 203365
Certification Statement:

We certify that the above referenced lot was processed, tested, and inspected in accordance with passivate treatment per AMS2700 Method 1, Class 4 and part standard.

DE TRAY PLATING WORKS

NAME: 

JOB TITLE: VICE-PRESIDENT

DATE: 7/26/2016

Nº 84134

CERTIFICATE OF COMPLIANCE TEST REPORT

FORM REV A 11/09

MADE IN THE U.S.A.

CUSTOMER NAME EAST COAST AVIATION SUPPL

PURCHASE ORDER NO. 70236

PART NO. AN526C832R9* REV 6

INTERNAL ROUTING NO. 35998

QUANTITY TWENTY SEVEN THOUSAND FOUR HUNDRED

MATERIAL/SPECIFICATION .152 302HQ CINCINNATI KCNS00024

DATE 5/12/2014

PARTS CONTAINED IN THIS SHIPMENT HAVE BEEN MANUFACTURED AND INSPECTED IN ACCORDANCE WITH APPLICABLE DRAWINGS AND SPECIFICATIONS.

PHYSICAL PROPERTIES

TENSILE STRENGTH HARDNESS SCALE

- | | |
|----------------|----|
| 1) 1620.0 LB T | 1) |
| 2) 1606.0 LB T | 2) |
| 3) 1625.0 LB T | 3) |
| 4) 1618.0 LB T | 4) |
| 5) 1609.0 LB T | 5) |
| 6) | 6) |
| 7) | 7) |
| 8) | 8) |

CONFORMS TO THE PROCUREMENT SPECIFICATIONS OF:

FF-S-92B

DFARS 252.225-7009

OTHER MECHANICAL TEST DATA

- ☒ MEET MAGNETIC PERMEABILITY REQUIREMENTS OF FF-S-92B, MIL-I-17214B, AND ASTM A342/A 342M TEST METHOD 3.

PARTS ARE FREE FROM MERCURY AND ASBESTOS CONTAMINATION.

VISUAL AND DIMENSIONAL INSPECTION SATISFACTORY

FINISH

MEETS PASSIVATION REQUIREMENT AMS2700
MTHD 1 TYPE 6/7 CL1/QQ-P-35

OTHER TESTING:

INSPECTED TO ANSI/ASQ Z1.4 LEVEL 2 REV 2008

ADDITIONALLY, AN ANSI/ASQC Z 1.4 SAMPLE OF THE FINISHED FASTENERS WERE TESTED IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS. SAMPLE PARTS AND THE TEST DATA ARE IN OUR RECORDS RETENTION AREA AS OBJECTIVE EVIDENCE AND WILL BE HELD AS REQUIRED.

Signature

TRACEY NIKSA, QC TECH

Cage Code #63020

CRESCENT MANUFACTURING OPERATING, CO.



700 George Washington Turnpike, Burlington, CT 06013, U.S.A.
Telephone: (860) 673-2591 Fax: (860) 673-5973

Scott Metal Finishing

310 Birch Street
Forestville, CT 06010
(860) 688-3378

—————Color Coding * Color Identification * Tumbling—————

—————Passivate * Bright Dip—————

CERTIFICATE OF COMPLIANCE

Customer: Crescent Manufacturing
Part No: AN526C832R9 Rev
PO No: 35998
Date of Shipment: 5/9/2014
Amount of Parts: 30,000

This is to certify that the material covered by this verification was manufactured in accordance with applicable specifications, drawings, and / or special requirements set forth in subject contract, and / or order at the time of delivery.

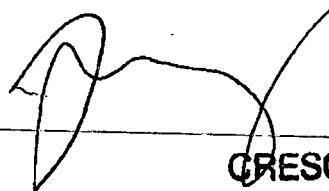
Physical, chemical, and environmental test reports applicable for the material and / or processes used are on file and available upon request.

Where applicable, final finish requirements were performed by qualified subcontractors who's certificate of compliance and test reports are on file and available upon request.

Material Specifications: MIRAGE EZ451/NITRIC ACID 20-25% @ 130 DEGREES

Finish Specifications: PASS PER AMS2700 REV E MTHD 1 CLASS 4

Roy, Ryan
Quality Control Manager



CRESCENT MFG
T.R. NO. 84134



KOS LIMITED

(YUSAN-DONG) 49, EOSIL-RO, YANGSAN-SI, GYEONGSANGNAM-DO, KOREA

TEL : (055) 389-1050 FAX : (055) 385-9189

E-mail : kosyrd@koswire.com

Inspection Certificate

DATE OF ISSUE: 2014-01-23

DESCRIPTION	STAINLESS STEEL WIRE FOR COLD HEADING (WSB)		
MILL CERT. NO.	AB1-201401A-0258	GRADE	AISI 302HQ
P.O NO.	13226	DIAMETER	0.1520 inch
INVOICE NO.	B13A003/02 (B13C140-04)	FINISH	DU X-CO (COIL)
CONTRACTOR	KOS AMERICA, INC.	QUANTITY	3,507.7 LBS (16 COILS)
CUSTOMER	CINCINNATI METALS	APP. SPEC	ASTM A 493-09/QCS-783F ISO A3506 A2 AMS S1266/SAB AIR412

CHEMICAL COMPOSITION

(wt%)

COMPONENT CH. NO.	C	SI	Mn	P	S	Ni	Cr	Cu			
KONS00024	0.0100	0.4200	0.7800	0.0250	0.0010	9.1700	17.3900	3.2900			

INSPECTION RESULTS

ITEMS COIL NO.	SIZE (inch)	T/S (ksi)	R/A (%)			Weight (lbs)	LOT NO.	REMARK
	+0.00100 -0.00100	85.0 75.0						
1	0.1517	78.8	80.3			249.1	IT0101-40117-0001	KONS00024
2	0.1517	78.8	80.4			249.1	IT0101-40117-0002	
3	0.1517	78.9	80.3			220.5	IT0101-40117-0003	
4	0.1517	78.7	80.4			207.2	IT0101-40117-0004	
5	0.1517	78.8	80.4			231.5	IT0101-40117-0005	
6	0.1517	78.8	80.4			249.1	IT0101-40117-0006	
7	0.1517	78.8	80.4			220.5	IT0101-40117-0007	
8	0.1517	78.8	80.4			220.5	IT0101-40117-0008	
9	0.1517	78.7	80.4			240.3	IT0101-40117-0009	
10	0.1517	78.8	80.4			216.0	IT0101-40117-0010	
11	0.1518	79.8	81.0			220.5	IT0101-40118-0011	
12	0.1518	78.9	81.0			227.1	IT0101-40118-0012	
13	0.1518	79.0	80.8			176.4	IT0101-40118-0013	
14	0.1518	79.0	80.5			176.4	IT0101-40118-0014	
15	0.1518	78.8	80.8			180.8	IT0101-40118-0015	

REMARKS
D/A CONT. NO : KSS0356/14
Conflict Minerals Compliant
DFARS Compliant/Melt in ITALY
DFARS per 252.225-7009
KONS00024-Cogne Heat 372684

We hereby certify that the material described herein has been made in accordance with the specification of the order.

Prior consultation with KOS Quality Control is necessary if used for aerospace, nuclear or medical applications.

W.S.BAEK

MANAGER OF Q.C Dept.

CONTINUE

CRESCENT MFG
T.R. NO. 84134

MILLCERT NO: AB1-201401A-0258

ITEMS COIL NO.	SIZE	T/S	R/A				Weight	LOT NO.	REMARK
	(inch)	(ksi)	(%)	()	()	(lbs)			
	+0.00100 -0.00100	85.0 76.0							
18	0.1518	79.4	80.6				222.7	1T0101-40118-0016	KCNS00024
REMARKS D/A CONT. NO : KSS0356/14 Conflict Minerals Compliant DFARS Compliant/Meet in ITAL DFARS per 252.225-7009 KCNS00024=Cogne Heat 372684			We hereby certify that the material described herein has been made in accordance with the specification of the order. Prior consultation with KOS Quality Control is necessary if used for aerospace, nuclear or medical applications.				W.S.BAEK MANAGER OF Q.C Dept.		

END

CRESCENT MFG
T.R. NO. 84134



KOS LIMITED

(YUSAN-DONG) 48, EOSIL-RO, YANGSAN-SI, GYEONGSANGNAM-DO, KOREA

TEL : (055) 889-1050 FAX : (055) 385-9189

E-mail : kosyrd@koswire.com

Inspection Certificate

DATE OF ISSUE: 2014-01-30

DESCRIPTION	STAINLESS STEEL WIRE FOR COLD HEADING (HSB)		
MILL CERT. NO.	AB1-201401A-0573	GRADE	AISI 302HQ
P.O. NO.	13228	DIAMETER	0.1520 inch
INVOICE NO.	B13C140/01 (B13C140-04)	FINISH	DU X-CO (COIL)
CONTRACTOR	KOS AMERICA, INC.	QUANTITY	1,263.2 LBS (5 COILS)
CUSTOMER	CINCINNATI METALS	APP. SPEC	ASTM A 493-09/QQS-783F ISO A3506 A2 AMS STD66/SAS AIR412

CHEMICAL COMPOSITION

(wt%)

COMPONENT CH. NO.	C	Si	Mn	P	S	Ni	Cr	Cu			
KCNS00024	0.0100	0.4200	0.7800	0.0250	0.0010	9.1700	17.8900	3.2900			

INSPECTION RESULTS

ITEMS COIL NO.	SIZE	T/S	R/A			Weight	LOT NO.	REMARK
	(inch)	(ksi)	(%)	()	()	()		
	+0.00100 -0.00100	85.0 75.0						
17	0.1517	79.0	80.9			249.1	IT0101-40120-0017	KCNS00024
18	0.1517	79.2	80.7			249.1	IT0101-40120-0018	
19	0.1517	79.6	81.2			249.1	IT0101-40120-0019	
20	0.1517	79.1	80.5			282.2	IT0101-40120-0020	
21	0.1517	79.0	80.9			283.7	IT0101-40120-0021	
REMARKS			We hereby certify that the material described herein has been made in accordance with the specification of the order. Prior consultation with KOS Quality Control is necessary if used for aerospace, nuclear or medical applications.				W.S. BAEK MANAGER OF Q.C Dept.	
D/A CONT. NO : KSS0416/14 Conflict Minerals Compliant DFARS Compliant/Melt in ITALY DFARS per 252.226-7009 KCNS00024-Cogne Heat 372684								

END

CRESCENT MFG

T.R. NO. 84134



BRIDGE

THIS CHEMICAL PRODUCTS ARE COMPETING TO THE POLYMER ORDER : COOPER

Control lot No.	-	Weight	=	0200080507529
REMARKS				80.700 kg
C				0.01g
				0.42 g
				0.78 g
				0.000 g

SENSITIVE TEST IN AS HELIUM/NEON CONDITION
Cathode 1st. No. - Weight = 02000503378
SERIAL NUMBER
-
8.39g XG
SER-10506847-1
(from membrane at 1st test)

**MEASUREMENT UNIT
OBSERVED**

THE MATERIAL, LEADS THE REQUIREMENTS OF THE OTHER SPECIFICATIONS
THE PRODUCT SATISFIES THE REQUIREMENTS. 2011/05 - 2000/03 2002/05 (CDS) 2003/11 - 2005/01
QUALITY SYSTEM CERTIFIED BY T-Q-0 ACCORDING TO THE ISO
5001:2008 - ISO/TS 16949:2009 (THE LAST ONE ONLY FOR HOT ROLL-DEFORMED-STEEL, STRAIGHTENED STEEL, BARE AND ZINCED COATED FORMS);

(301) DATE 18.07.2013

POLYESTER FILT, 100% PET (QUANTITY 1000000) - ELECTRONICALLY GENERATED CERTIFICATE

CRESCENT MFG
T.R. NO. 84134



8261 Cornell Road.
Suite 620
Cincinnati, OH 45249
Ph: 800-999-2600
Fax: 513-755-9603

TEST CERTIFICATE

Bill To:
CRESCENT MANUFACTURING
P.O. BOX 1350
BURLINGTON, CT 06013

Ship To:
CRESCENT MANUFACTURING
700 GEORGE WASHINGTON TPK.
BURLINGTON, CT 06013

Customer PO#: K14-21

Customer Part #:

Invoice Date: 4/4/2014 Invoice: 20436	CMC SO: 26349 Line: 2 Item: 3021620HQXC.CTDZ	Ordered: 4,799 Shipped: See Tags
Item Desc: .1520 302HQ X-COAT,250 CL SPECS ASTM A-493-05/QQS-783F ISO A3508-A2 AMS STD66 SAE AIR4127		
The raw material does not contain the conflict minerals.		

MATERIAL TEST RESULTS

Heat: KCNS00024

Chemical Composition %

	<u>C</u>	<u>MN</u>	<u>P</u>	<u>S</u>	<u>SI</u>	<u>CR</u>	<u>NI</u>	<u>CU</u>	<u>MO</u>	<u>N</u>
Actual:	0.010	0.7800	0.025	0.001	0.420	17.390	9.170	3.290	0.000	0.000

Mechanical Properties

<u>Tensile Strength (KSI):</u>	<u>Country of Origin (Melt)</u>	<u>Alt Heat Number</u>	<u>DFAR Compliant (Y/N)</u>
79.80	ITALY	372884	YES 252.225-7009

Tag: 31484	S	26349	932 lb
Tag: 31485	S	26349	928 lb
Tag: 31486	S	26349	910 lb
Tag: 31487	S	26349	759 lb
Tag: 31604	S	26349	1,270 lb
Total Weight:			4,799 lb

Material Test Results and Specifications are provided to
Cincinnati Metals Company by the Issuing mill.

John Cooper, QC

CRESCENT MFG
T.R. NO. 84134



Western Wire Products Company

770 Sun Park Drive - Fenton, MO 63026
Phone: 800.325.3770 or 636.305.1100 - Fax: 636.305.1119
www.WesternWireProd.com - Sales@WesternWireProd.com

October 20, 2017

Made in USA

EAST COAST AVIA SUPS INC
399 EAST DRIVE
MELBOURNE, FL 32904

Re: Purchase Order # FL80848
Western Wire Order # 524598-00

Dear Madam or Sir:

This is to certify that the referenced shipment contained the items and quantities below.

<u>Quantity</u>	<u>Part Description</u>	<u>Lot</u>	<u>Material</u>
8,000	MS24665-300 3/32 X 3/4 STAINLESS EXT. PRONG - CHISEL PT. COTTER PINS	CDMS090616A- 4	14
1,000	MS24665-366 1/8 X 1/2 STAINLESS EXT. PRONG - CHISEL PT. COTTER PINS	CDMS063017A	14

are made of the following material:

- 14 18/8 TYPE 302/304 CHROME-NICKEL, CORROSION RESISTANT STAINLESS STEEL, CONFORMING TO ASME B18.8.1 - 2014 IN ACCORDANCE WITH NATIONAL AEROSPACE STANDARD NASM24665 REV 2 AND PASSIVATED IN ACCORDANCE WITH AMS2700, METHOD 2.

The material as shipped is free from mercury contamination.

L. Braddum, Chief Clerk



Western Wire Products


770 Sun Park Drive
Fenton, MO 63026
636/305-1100 Fax: 636/305-1119
800-325-3770
www.westernwireprod.com
sales@westernwireprod.com

PACKING SLIP

Order #	Page #	*** REPRINT ***
457718-04	1	
PO Date	PO #	
12/23/14	10109NV	

Cust #: 522319
Bill To: EAST COAST AVIA SUPS INC
399 EAST DRIVE
MELBOURNE, FL 329041030

Ship To: E C A S WEST
7540 DEAN MARTIN DRIVE
SUITE 506/507
LAS VEGAS, NV 89139

Order Type: EMAIL				
Instructions	Taken By	Order #		
	cinn			
Ship Point	Via	Request	Shipped	Terms
Western Wire Products Co	UPS COL GR	02/02/15	03/19/15	1%15 N30

LINE	ITEM AND DESCRIPTION	BIN	ORDERED	B.O.	SHIPPED	UN	PACKED	TYPE OF CONTAINER	CONTAINER WEIGHT
+++++ Western Wire Cotter Pins conform to Federal Specifications when applicable, and when specified. Supporting material test reports are on file. +++++ <i>Gene B. HOLLAND RCA</i> +++++ PACKING: ***** MUST HAVE A SIGNED PACKING SLIP ***** DO NOT HOLD ORDER MORE THAN 1 WEEK SHIP AND BACKORDER SHIP RUSH AND BACKORDER ON ALL ORDERS!! *** CUSTOMER MUST HAVE ALL LOT #'S LISTED ON PACKING SLIP *** ***** DO NOT SEND PARTS THAT DO NOT HAVE A LOT # ***** SHIPPING: FED X ACCT. #1581-7115-5 (ONLY IF ORDERS ARE NOTED FEDEX!!) UPS COLLECT NUMBER 316-5EO, OVER 200# SHIP FEDEX ECONOMY COLLECT 415047517									
10	103012MS151S 1/16 X 1/2 STAINLESS STAINLESS STEEL COTTERS Interchange Prod: MS24665-151 COTTER PINS MS24665-151 Lot #: DSS110514A-4 BULK PACK CTN 1 35# CC 3-19-15	/ /C06/03A	67,000.00	0.00	67,000.00	EA			
6	103114EPCPCP MS24665-138 1/16 X 1-1/4 STEEL COTTERS, CAD. PLTD Interchange Prod: MS24665-138 .0002 YELLOW CHROMATE EXTENDED PRONG CHISEL POINT IN CTN 2 CC 2-19-15	/ /C05/12A	1,762.00	1,762.00	0.00	EA			
Lines Total		** # of Lines Not Printed	Qty Shipped Total		Total				
Picked By	Packed By	Checked By	Cube	Weight	Freight Charges	Received By	Date Received		

NO RETURNS WITHOUT PRIOR APPROVAL (RMA # REQUIRED)

Continued

GENIE FASTENER MFG CO

35 CARLOUGH RD - UNIT 1
BOHEMIA NY 11716
631-737-4022/FAX 737-4028

PACKING LIST

Shipper No: 243223
Ship Date: 10-22-14
Page: 1

JO
10/28

B EAST COAST AVIATION

399 EAST DR.
MELBOURNE, FL 32904
USA

ATTN: 321-727-0047

S EAST COAST AVIATION

399 EAST DR.
MELBOURNE, FL 32904
USA

ATTN: 321-727-0047

Sales Order No: 243524

Order Date: 04/01/14

Cust Code: 787

Lot Number: 12-225 14-170

Purchase Order: [REDACTED]

Ship Via: UPS

FOB: NY

Salesperson: 0

Line	Part Number	Description	UM	Qty Ordered	Qty Actually Shipped	Qty Backordered
------	-------------	-------------	----	-------------	----------------------	-----------------

001 MS24693S49 NASM24693S49

M 41000.00 / 43,000 p/s

ACCEPTED

Rev. 3.
(Lot # 14-170)
MANF: GENIE

2 Boxes w/ 13,500 p/s
1 Box w/ 16,000 p/s

Total Weight:	Freight: UPS/GND/collect	Date Filled: 10/22/14
# of packages: 3	COD amount:	Filled By: [Signature]

No returns will be accepted without a return material authorization number.

Certificate of Conformance

All returns MUST be reported within 30 days of receipt of goods.
Any shortages or discrepancies MUST be reported within 10 days of receipt.

This is to certify that all materials supplied by Genie Fastener Mfg Co., Bohemia, NY 11716, conform to current drawings and are in accordance with applicable specifications.
Inspected by [Signature]

Rec'd by

Form GF26 Rev A 8/18/14

GENIE FASTENER MFG. CO.

35 CARLOUGH RD., UNIT 1 / BOHEMIA, NY 11716

PHONE: 631.737.4022 / FAX: 631.737.4028 / EMAIL: guardqc@aol.com

QUALITY MANUFACTURED FASTENERS SINCE 1986

10/22/14

EAST COAST AVIATION SUPPLIES
399 EAST DRIVE
MELBOURNE, FL 32904

WE HEREBY CERTIFY THAT THE BELOW ITEMS WERE MANUFACTURED AND
INSPECTED IN ACCORDANCE WITH REQUIRED SPECIFICATIONS.

PART NUMBER	PURCHASE ORDER	DESCRIPTION
MS24693S49 NASM24693S49 Rev 3	70572	8-32 X .437 Csk Head machine screw. 1022 steel per Air4127. Plated per AMSQQ-P-416C, Type II, Class 3.
QUANTITY	LOT NUMBER	
43,000 Pcs.	14-170	

HEAT NUMBER: 2NY56 / Industrial Steel & Wire

CHEMICAL ANALYSIS: COPY OF ORIGINAL WIRE CERTIFICATION ATTACHED

TENSILE RESULTS: 1080
(840 lbs. min) 1100
1100
1020
1100

Very truly yours,
GENIE FASTENER MFG. CO.


Mary Richardson
Quality Assurance



1901 N. Narragansett Ave. • Chicago, Illinois 60639
773/804.0404 • Fax 773/804.0408
www.industeel.com
An ISO 9001 Certified Company

06/16/14

ISW Order/Invoice Number: 190610-00

SOLD TO: G0321
GENIE FASTENER MFG. CO.
35 CARLOUGH ROAD
UNIT 1
BOHEMIA NY 11716

SHIP TO: G0321
GENIE FASTENER MFG. CO.
35 CARLOUGH ROAD
UNIT 1
BOHEMIA NY 11716

CUSTOMER PO: 2883W

1390HIPC

.1390"C1022 COLD HEADING SAIP AKFG COILS

WEIGHT: 866

HEAT NUMBER: 2NY56

CHEMISTRIES

C	Mn	P	S	Si
.230	.970	.017	.008	.040

PHYSICAL PROPERTIES

TENSILE: 68000. 68000.

ROCKWELL #1:
ROCKWELL #2:

YIELD STRENGTH: 000000/000000
ELONGATION:
REDUCTION OF AREA: 79.0/79.0

*** SPECIFICATIONS ***
IFI 140
ASTM F2282-03
AIR 4127 CHEM. ONLY


TORSIONS:

BENDS:
SALT SPRAY HOURS:
COATING WEIGHT:
GRAIN SIZE:

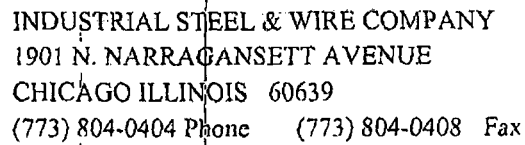
**** MERCURY FREE ****

TARIFF: 7217.10
NAFTA:

MELT: TW TAIWAN
ORIG: TW TAIWAN
MILL: CHUN YU
DFAR: N
ROHS: Y


Rey Domingo, Quality Control Manager

The values and specifications herein are passed through from the manufacturer directly to the customer.
Please see reverse side or www.industeel.com for all Terms and Conditions of Sale.
Material Properties Sheet 70403-MPS Version 1 Approved by BF 11/20/12



866



CHUN YU WORKS & CO., LTD.

NO.100, TAPAO ST., KANGSHAN DIST., KAOHSIUNG CITY 820, TAIWAN (R.O.C.)
TEL:886-7-622-4111 FAX:886-7-623-6721



IATF 0149306



IT000206



Quality Management



N° 201008022.1



Testing Certificate

CY-G4-01-16-04

TEST CERTIFICATE

1390 HIPC CY54

REPORT NO: JSW40060301

CUSTOMER	INDUSTRIAL STEEL & WIRE
P.O. NUMBER:	PO# 063158
INVOICE NO:	JSW-4006
S/C NUMBER:	JSW-35774
DATE OF ISSUE:	2014/03/19
MATERIAL SPEC:	AISI-1022 AK SAIP
BUNDLE QTY:	5 BUNDLES
BUNDLE WEIGHT:	AHT 1955 LBS
TOTAL WEIGHT:	9775 LBS

CHEMICAL COMPOSITION: %

HEAT NO.	BUNDLE NO	C X100	Mn X100	P X1000	S X1000	SI X100	Cu X100	Ni X100	Cr X100	Mo X100	V X1000	B X10000	Al X1000
2NYS6	1-5	23	97	17	8	4	***	***	***	***	***	***	43

PHYSICAL PROPERTIES:	DIAMETER MM	TENSILE STRENGTH KG/MM ²	REDUCTION OF AREA%	SPHEROIDIZED STRUCTURE%
SPECIFICATION	0.139-0.001 - 0.000	74 MAX	***	80 MIN

TEST RESULT

BUNDLE NO	DIAMETER MM	TENSILE STRENGTH KG/MM ²	REDUCTION OF AREA%	SPHEROIDIZED STRUCTURE%
1-5	0.139-0.139	68-68	79-79	83-83

Q.A MANAGER:

S. H. LA9

note
4/15/14

WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.

SILVERMAN - GORF, INC.
SPECIFICATION ELECTROPLATING
60 FRANKLIN AVENUE
BROOKLYN, N.Y. 11205
(718) 625-1309

CERTIFICATE OF COMPLIANCE

Cert #GUM14038

Date 10/20/2014

1. IT IS HEREBY CERTIFIED THAT ALL THE ARTICLES

IN THE QUANTITIES AS CALLED FOR IN:

A/ CONTRACT No: LOT 14-170

B/ PURCHASE ORDER No: PL14103

C/ PLACED BY: GENIE FASTENER CO

D/ SILVERMAN-GORF, INC JOB No: 57583

E/ PART DESCRIPTION AND SIZE: CSK HD SCREW 8-32X437

F/ PART NUMBER: MS24693S49

G/ QUANTITY BY WEIGHT: 110.00

BY PIECES: Not Available

H/ SPECIFICATION: AMSQQP416F TY2 CL3

I/ HYDROGEN EMBRITTLEMENT RELIEF: None

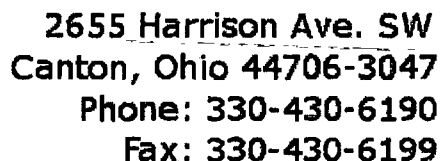
ARE IN CONFORMANCE WITH THE REQUIREMENTS, SPECIFICATIONS
AND DRAWINGS LISTED IN THAT ORDER.

2. CONFIRMING THE DATA IS AVAILABLE AT 60 FRANKLIN AVENUE,

BROOKLYN, N.Y. 11205.

BY: SILVERMAN-GORF, INC.

President



ECAS

I Hereby Certify that on **04/25/17** Airfasco Industries provided the supplies called for by Contract/ PO Number **FL79288** in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7009 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.

Quality Assurance Representative


WM. DENT

[illegible]



2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 01/28/05 PART NO.: AN5-30A per NASM5-30A rev. 1
AFC LOT NO.: 11125 QTY MFG.: 31,233
PROCUREMENT SPECIFICATION: Produced per NASM 6812

HEAT TREAT

VENDOR: USA Heat Treat CERTIFICATION NO.: 82547
PROCUREMENT SPECIFICATION: Heat Treat per MIL-H-6875 H

PLATING

VENDOR: Beringer Plating CERTIFICATION NO.: 33425
PROCUREMENT SPECIFICATION: Cadmium Plate per QQ-P-416, Type II, Class 2, F

MATERIAL

MILL: Republic COUNTRY OF MELT: USA HEAT: 7280171
GRADE SPECIFICATION: Alloy Steel per AMS 6300 E, Type 4037, .328"

4037 MATERIAL CHEMISTRY											
ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.370	.790	.009	.006	.250	.030	.080	.220	.020	.033	

PHYSICAL PROPERTIES				
PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	6,500 lbs.	4,980 lbs.	5,750 lbs.	HRC 26-32
ACTUAL	8,298 lbs.	7,900 lbs.	6,301 lbs.	HRC 30-31

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries
Quality Assurance Representative: T. West

T. West

PCS CUYAHOGA, L.L.C.
31000 COLON ROAD
COLON, OHIO

MATERIAL CERTIFICATION

DATE: May 30, 2004

SLIP NO: 00051

Sold to: *PS*
AIRPASCO INDUSTRIES
2655 HARRISON AVE SW
CANTON OH 44706-3047

Ship to:
AIRPASCO INDUSTRIES
2655 HARRISON AVE. S.W.
CANTON OH 44706-3047

ALL CHEMISTRY DATA IS CERTIFIED BY THE HOT MILL SUPPLIER.
WHEN ELEMENT CONTENTS ARE REPORTED AS ZERO, ACTUAL CONTENTS
MAY EQUAL ZERO OR WERE NOT REPORTED BY THE HOT ROLL MILL.

Order No.	Customer P.O. No.	Ship Date	Ship Via	P.O.D.
1030/CC	34924	5/06/04	CUST TRUCK COL	COLON

Our Order NO.	Order Date	Sales Rep	Qty. Shipped
29360/	12/11/03	07	38,585.00

Item Description: 21/64" R SAROD, PHOS POLY COIL 4037 C.3291RAIRCL

Sheet# 7280171

CHEMICAL ANALYSIS

C	Mn	P	S	Pb	Si	Cr	Ni	Kc
.370	.790	.009	.006		.260	.080	.030	.220
V	Al	Cu	Sn	Te	Bi	Sb	Cb	
.001	.033	.020	.001				.001	
N	DI (in)							
.0045								

MECHANICAL PROPERTIES

*****Structure *****Hardness YS-.2% OFF-991...Tensile ST. EST *****Elongation
100% SPH 70500

***X Red.-Area ***Carbon Free ***D.A.D Decarb MET. Approved
68 .000 .003 STEVE BRYNER

MATERIAL INFORMATION

HOT MILL REPUBLIC	REDUCT. RATIO	CAST METHOD BILLET	GRAIN PRACTICE FINE	ORIG MEST FRO REPUBLIC
----------------------	---------------	-----------------------	------------------------	---------------------------

COMMENTS:

04/30/04 SB SAC/ROD

RECEIVED

MAY 07 2004

Cardan



TENSILE TESTING
METALLURGICAL LABORATORY

A DIVISION OF T.T. INDUSTRIES CO., INC.

1520 WILLOW PARKWAY
CLEVELAND, OHIO 44114
PHONE (216) 641-3290
FAX (216) 641-1223
www.tensile.com

Airfasco Industries Inc.
2655 Harrison Ave. SW
Canton OH 44706

Job No.: B4-237-326
Date: 8-27-14
Cust. PO#: 61206

Description: 1 sample Mill: Republic Country of Melt: USA
Material: 4037 Heat# 7280171
Spec: AMS 6300E

----- TEST RESULTS -----

Product Analysis of Elements in % (OES per TTML C-011):

	<u>Actual</u>	<u>Requirements</u>
Carbon	0.35	0.35-0.40
Manganese	0.80	0.70-0.90
Phosphorus	0.009	0.040 Max.
Sulfur	0.005	0.040 Max.
Silicon	0.25	0.15-0.35
Chromium	0.08	0.20 Max.
Nickel	0.03	0.25 Max.
Molybdenum	0.22	0.20-0.30
Columbium	0.002	N/A
Aluminum	0.035	N/A
Copper	0.02	0.35 Max.
Vanadium	0.001	N/A
Titanium	0.002	N/A

The above conforms to specifications listed.


Authorized Agent



Page 1 of 1

This Report May Not Be Reproduced Except In Full

This report represents Tensile Testing interpretation of the results obtained from the test and is not to be construed as a Warranty or Warranty of the condition of the materials tested. Tensile Testing shall not be held liable for misinterpretation of conditions, loss, damage, injury or death arising from or attributable to delay preceding a test or subsequent to performance of a test.

USA HEAT TREATING INC..
4500 LEE ROAD, CLEVELAND OH 44128
(216) 587-4700 FAX: (216) 587-0707

SO#: 82547

Date Recieved: 1/12/2005
P.O.: 37046

CERTIFICATION

Customer AIRFASCO INDUS

Description BOLT, AN

Part Number: AN5-30A

Containers: 3 Bins

Weight 2269

Material: 4037

Type Of heat Treatment: Neutral Harden

RC 28-32

Customer Specifications: NEW PART CERTS

LOT # 11125

BIN # 1121-1091-1094

Test Results:

RC 31.8-30.9-30.8-30.7-30.5-31.3-31.9-31.7-31.3-31.9-31.5-31.6
31.3-31.9-31.4-31.6-31.5-31.2
30N 50-51-50-51-51

The above order has been processed and inspected. All samples tested were within the above stated results.

Tested By: *DELANEY*

Approved quality technician

Date 1/14/2005

BY: Quality Control

ISO 9001:2000 Registered Company

Approved by Bruce Ho
Revision Date: 3-9-

CUSTOMER: Airfasco Industries

Rev.

Baking (if required) N/A Hours at F

ACC. X

Aircraft Braking System:	1%
---------------------------------	-----------

Date: 1/28/05

33425

Gordon

AIRFASCO Industries

2655 Harrison Avenue SW Canton, OH 44706

Nondestructive Testing Certification Wet Fluorescent Magnetic Particle Inspection Technique

Part Data

Part Number	Lot Number	Dimensions	Part Description
AN5-30A	11125	5/16-24 X 3 3/32	BOLT-MACHINE, AIRCRAFT

Reference Data

Specification	Procedure Number	Acceptance Criteria
ASTM E1444	MT-1	No Cracks, NASM 6812

Inspection Equipment Data

Model Number	Manufacturer	Serial Number
H-800 Retro	Magnaflux Corporation	91R00150

Inspection Material Data

Particles	Mfr	Batch No.	Carrier	Mfr	Batch No.
14A	Magnaflux	10G078	MG II	Magnaflux	14B056

Technique Data


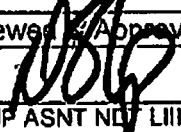
Type Current	Circular Field		Longitudinal Field	
	Headshot Amps	Central Conductor Amps	Coil shot Amps	Coil Turns
FWDC	200	N/A	850	5

Particle application by the flow method, continuous technique
Demagnetization performed by the AC Coil method, Residual field +/- 3

Inspection Results

Lot Size	Inspection Sample Size	Quantity accepted	Quantity rejected
33003	50	50	0

Notes:

Performed by / Level	Reviewed / Approved by:	Date
 D. SHOUP ASNT NDT LEVEL III	 D. SHOUP ASNT NDT LIII #176608	10/22/14



AIRFASCO
INDUSTRIES
MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

CERTIFICATE OF CONFORMANCE

BILD INDUSTRIES

I Hereby Certify that on 04/11/14 Airfasco Industries provided the supplies called for by Contract/ PO Number **70679** in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7014 ALT 1 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.


WM. DENT

Quality Assurance Representative

PART NUMBER	LOT NUMBER	QUANTITY	PART NUMBER	LOT NUMBER	QUANTITY
AN5-32A	15137	5000			



AIRFASCO

INDUSTRIES

MANUFACTURER OF AEROSPACE PRODUCTS

2655 HARRISON AVE. SW
CANTON, OH 44706
PHONE: (330)430-6190
FAX: (330)430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 03/14/08

PART NO.: AN5-32A per NASM5-32A rev. 1

AFC LOT NO.: 15137

QTY MFG.: 22,696

PROCUREMENT SPECIFICATION: Produced per NASM 6812 rev. 2

HEAT TREAT

VENDOR: Brite Metal

CERTIFICATION NO.: B-138764

PROCUREMENT SPECIFICATION: Heat Treat per AMS-H-6875 A

PLATING

VENDOR: Beringer Plating

CERTIFICATION NO.: 48358

PROCUREMENT SPECIFICATION: Cadmium Plate per AMS-QQ-P-416B, Type II, Class 2

MATERIAL

MILL: Republic

COUNTRY OF MELT: USA

HEAT: 7243491

GRADE SPECIFICATION: Alloy Steel per AMS 6300 C, Type 4037, .328"

4037 MATERIAL CHEMISTRY											
ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	Other	Other
LADLE	.380	.800	.009	.003	.210	.030	.080	.260	.020		

PHYSICAL PROPERTIES				
PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	6,500 lbs.	4,980 lbs.	5,750 lbs.	HRC 26-32
ACTUAL	8,321 lbs.	7,913 lbs.	6,847 lbs.	HRC 29-30

Non-Destructive Magnetic Particle per ASTM-E-1444-01

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

Airfasco Industries

Quality Assurance Representative:


Wm. Dent

2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199

CERTIFICATE OF CONFORMANCE

ECAS

I Hereby Certify that on 04/11/17 Airfasco Industries provided the supplies called for by Contract/ PO Number **FL79150** in accordance with all applicable requirements for shipment. I further state that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States. DFAR 252.225-7009 compliant in fastener base raw material melt source only, with heat number and country, does not include the post cadmium metal plating.

Quality Assurance Representative


WM. DENT

[illegible]



Michigan Wire Tech, LLC

2487 West Main Street
Lowell, MI 49331
Phone (516) 897-6080
Fax (516) 897-6226

SOLD TO

G3 Steel Group/c/o AIRFASCO
2655 HARRISON AVE SW
CANTON, OH 44706
USA

CERTIFICATION

WORK ORDER
F2330

HEAT NO.
1Q2137
SALES ORDER / RLS
F2330 / 1
ISO 9001-2008 REGISTERED

CERT# 911.01

CUSTOMER P.O. 61667-2	CUSTOMER PART	QUANTITY 10,304 Lbs	CARRIERS 4	LADING NO 00117024	SHIPMENT DATE 04/27/2015					
SPECIFICATION G614037-303900-MA A-4037, AKFG, CHQ WIRE, SAFS Zinc Phosphate and Lube Coating, Size:0.389/0.391										
CERTIFICATION REQUIREMENTS										
Chemical Properties										
C .38	Si .24	Mn .77	P .012	S .001	Cu .05	Ni .07	Cr .07	Mo .219	Al .040	N .0042
Physical Properties										
Mill Source Rocky Mount Grain Size 6										
Mechanical Properties										
TEST		UNITS		Results						
% Spheroidization		%		85						
Tensile Strength		KSI		73.8						
<p>Merchandise covered by this invoice is warranted to be free from defects in workmanship or material but not for any specific length of time, type or measure of service. No claim for allowance will be recognized unless presented in writing within 10 days time after receipt of material. Our maximum liability for any claim predicated upon defective merchandise is limited to replacement of it, or to repayment of it, or to repayment of the purchase price thereof, as we elect. Material cut to specific length or size cannot be returned for credit and request for cancellation of such orders will not be considered if manufacture has been commenced. Buyer, by acceptance of the merchandise covered by this invoice, agrees to the foregoing terms and conditions and those set forth on the reverse hereof. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal statutes including Federal law, Title 18, Chapter 47.</p> <p>REPRODUCTION OF THIS CERTIFICATION IS NOT ALLOWED UNLESS IN FULL.</p> <p>Wire Tech, Inc. metallurgical laboratory is accredited in the following test: chemical analysis per ASTM E 415, mechanical testing per ASTM A 370, Rockwell hardness per ASTM E 18, metallographic mount preparation per ASTM E 3, decarburization depth per ASTM E 1077, IP1 140, inclusion rating per ASTM E 45, decarburization performed as per IP1 140.</p> <p>The reported Chemical and Physical Properties are Mill Source results. Transcribed from mill certificates. HRS(H) are hardness results performed with a 1/16" carbide ball. Unless otherwise specified, HRS and HRC results are conversions from ASTM A370 tables 1 and 2. *Test result not covered by our current ASLA accreditation. Tests which have been undertaken by a subcontractor laboratory that is not accredited are not endorsed by ASLA or covered by Wire Tech, Inc. ASLA accreditation.</p> <p>TEST RESULTS RELATE ONLY TO THE ITEMS TESTED.</p> <p>LATEST REVISIONS OF ASTM</p> <p>DPAR Material per Clauses 252.225-7014 ALT. 1, 252.225-7009, & 225.003(9)</p> <p>Material is free of mercury, radium, or alpha contamination.</p>										



Michigan Wire Tech, LLC

2487 W. Main Street ph(616)897-6080
P.O. Box 70 fx(616)897-6226
Lowell, MI 49331

THIS REPORT SHALL NOT BE REPRODUCED IN WHOLE
OR IN PART WITHOUT THE PRIOR WRITTEN APPROVAL
OF MICHIGAN WIRE TECH LLC

We hereby certify that test results shown are correct as
contained in the records of the company. These results
relate only to the items tested.

Kevin Day Director of Quality Assurance

Kevin Day

Test Report

36110

61293	Purchase Order - Sold To H7962	Purchase Order - Ship To		Sold To	
	Vehdor Michigan Wire Tech LLC 2487 West Main St. Lowell, MI 49331	Report Date 10-6-14	J # J123012	G3	
		Shipped Date	Packing Slip #		
Specification NA		Size .390	Grade 4037	Quantity 2	Weight 10142

Tensile KSI	Hardness HRB	ROA %	Spheroidization % Minimum	Decarb 0.001 Inches TAD
71.6	80	70.3	90	1

Test Analysis (wt. %) All tests were performed by Michigan Wire Tech LLC, unless otherwise specified, in accordance with the following: Mechanical Properties per ASTM E8, Rockwell Hardness per ASTM E18, Spheroidization per IFI-140 and Decarburization per ASTM E1077. All tests performed to the current standard date, unless otherwise noted.

Heat #	C	Mn	P	S	Si	Cu	Ni	CR	MO	AL	B	SN	V	N	CB	Mill
1Q2137A	.38	.77	.012	.001	.24	.05	.07	.07	.219	.040	.0001	.002	.006	.0042		EVRAZ



A DIVISION OF J.T. ADAMS CO., INC.

4520 WILLOW PARKWAY
CLEVELAND, OHIO 44125
PHONE (216) 641-3290
FAX (216) 641-1223
www.tensile.com

CERTIFIED TEST REPORT

Airfasco Industries Inc.
2655 Harrison Ave. SW
Canton OH 44706

Job No.: 1501-15-0685
Date: 1-19-15
Cust. PO#: 61593

Description: 1 sample Mill: Evraz Country of Melt: USA
Material: 4037 Heat# 1Q2137
Spec: AMS 6300E

TEST RESULTS

Product Analysis of Elements in % (OES per TTML C-01D):

	Actual	Requirements
Carbon	0.38	0.35-0.40
Manganese	0.80	0.70-0.90
Phosphorus	0.008	0.040 Max.
Sulfur	<0.001	0.040 Max.
Silicon	0.23	0.15-0.35
Chromium	0.06	0.20 Max.
Nickel	0.07	0.25 Max.
Molybdenum	0.22	0.20-0.30
Columbium	<0.001	N/A
Aluminum	0.045	N/A
Copper	0.05	0.35 Max.
Vanadium	0.006	N/A
Titanium	0.003	N/A

The above conforms to specifications listed.


Authorized Agent



Page 1 of 1

This Report May Not Be Reproduced Except in Full

This report represents Tensile Testing interpretation of the results obtained from the test and is not to be construed as a Warranty or Warranty of the condition of the materials tested. Tensile Testing shall not be held liable for misinterpretation of conditions, loss, damage, injury or death arising from or attributable to delay preceding a test or subsequent to performance of a test.

BRITE METAL

CERTIFICATION OF PROCESS

CUSTOMER: AIRFASCO INDUSTRIES, INC
2655 HARRISON AVE SW
CANTON OH 44706

**THIS IS TO CERTIFY THAT BRITE METAL INC. HAS PROCESSED THE FOLLOWING
MATERIAL IN ACCORDANCE WITH THE MOST WIDELY ACCEPTED
METALLURGICAL PROCEDURE.**

PO #: 62330 **WEIGHT:** 1,429 **NO. BINS:** 1 **NO. PCS:** 24,400

PN#: AN6-13A **LOT#:** 25482 **MATERIAL#:** 4037

BM ORDER NO: 171014 **CORE HARD SPECS:** HRC 28-32

PROCESS TO: AMS 2759

DATE RECEIVED: 12/01/15 **DATE SHIPPED:**

HEAT TREATING TEST RESULTS

CORE HARDNESS: _____ **RC 29 / 30** _____

SURFACE HARDNESS: _____ **RC 29 / 30 @.003** _____

CASE DEPTH: _____ **N/A** _____

CORE HARDNESS AS QUENCHED: _____ **N/A** _____

INSPECTOR: _____ **SK** _____

DATE: _____ **12-14-15** _____

Approved by Bruce Hogie
Revision Date: 2/13/2013

CERTIFICATE OF COMPLIANCE

SUPPLIER: **BERINGER PLATING, INC.**
1211 DeValera Ave.
Akron, OH 44310
330-633-8409 Fx 330-633-8447
sales@beringerplating.com

CUSTOMER: Airfasco Industries, Inc.

Beringer Invoice: 91405

P.O. Number: 62396

Part Number: AN6-13A

Lot Number: 25482-01

Lot Quantity: 24,400 pcs

Specification: Cadmium Plate per AMS-QQ-P-416D Type II, Class 2

Mercury Free Clause: No possibility exists for mercury contamination to occur during processing or testing of parts on this contract.

Coating Thickness: .0003 inches

Embrittlement Relief

Baked: N/A Hours at F Within 1 Hour of Plating.

Inspection Level to applicable standard:

S-3 of MIL.-STD.-105D:

4 %

ASTM B602 Table II:

1.50%

Aircraft Braking System:

1%

ACC. X

Certified By:

James Beringer Jr.
President

Date: 1/5/2016

AIRFASCO Industries

2655 Harrison Avenue SW Canton, OH 44706

Nondestructive Testing Certification Wet Fluorescent Magnetic Particle Inspection Technique

Part Data

Part Number	Lot Number	Dimensions	Part Description
AN6-13A	25482	.3750-24 X 1.453	BOLT-MACHINE, AIRCRAFT

Reference Data

Specification	Procedure Number	Acceptance Criteria
ASTM E1444	MT-1	No Cracks, NASM6812

Inspection Equipment Data

Model Number	Manufacturer	Serial Number
H-800 Retro	Magnaflux Corporation	91R00150

Inspection Material Data

Particles	Mfr	Batch No.	Carrier	Mfr	Batch No.
14A	Magnaflux	10G078	MG II	Magnaflux	14B056

Technique Data

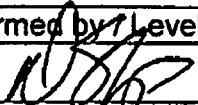
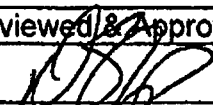
Type Current	Circular Field		Longitudinal Field	
	Headshot Amps	Central Conductor Amps	Coil shot Amps	Coil Turns
FWDC	250	N/A	1990	5

Particle application by the flow method, continuous technique
Demagnetization performed by the AC Coil method, Residual field +/- 3

Inspection Results

Lot Size	Inspection Sample Size	Quantity accepted	Quantity rejected
24400	50	50	0

Notes:

Performed by Level	Reviewed & Approved by:	Date
		1/8/16
D. SHOUP ASNT NDT LEVEL III	D. SHOUP ASNT NDT LIII #176608	

**2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199**

CERTIFICATE OF CONFORMANCE

ECAS

I hereby certify that on 06/05/17 Airfasco Industries provided the supplies called for by Contract/ PO Number FL79636 in accordance with all applicable requirements for shipment. I further state/ that the process certifications are in conformance with the contract requirements, including specifications and/or drawings, physical item identification (part number) and the quantity shown on this or attached acceptance document. The part numbers certified below have been manufactured in the United States.

Quality Assurance Representative


WM. DENT

[illegible]



2655 Harrison Ave. SW
Canton, Ohio 44706-3047
Phone: 330-430-6190
Fax: 330-430-6199

PHYSICAL AND CHEMICAL CERTIFICATION

DATE MFG.: 11/23/15 PART NO.: AN3-3A per NASM3-3A rev. 3

AFC LOT NO.: 25531 QTY MFG.: 233,500

PROCUREMENT SPECIFICATION: Produced per NASM 6812

HEAT TREAT

VENDOR: Brite Metal CERTIFICATION NO.: 170678

PROCUREMENT SPECIFICATION: Heat Treat per AMS 2759

PLATING

VENDOR: Berlinger Plating CERTIFICATION NO.: 90480

PROCUREMENT SPECIFICATION: Cadmium Plate per AMS-QQ-P-416 D, Type II, Class 2

MATERIAL

MILL: ISW/Arcelor COUNTRY OF MELT: USA HEAT: C97211

GRADE SPECIFICATION: Alloy Steel per AMS 6300 F, Type 4037, .218"

4037 MATERIAL CHEMISTRY

ELEMENT-ID.	-C-	-MN-	-P-	-S-	-SI-	-NI-	-CR-	-MO-	-CU-	-AL-	Other
LADLE	.390	.850	.004	.009	.220	.010	.030	.234	.020	.028	


PHYSICAL PROPERTIES

PHYSICAL	TENSILE	YIELD	SHEAR	HARDNESS
REQUIRED	2,210 lbs.	1,690 lbs.	2,125 lbs.	HRC 28-32
ACTUAL	3,836 lbs.	2,984 lbs.	2,646 lbs.	HRC 29-30

We hereby certify that the above data is correct and that the fasteners have been manufactured and inspected in accordance with Airfasco Industries quality requirements.

QS-082
REV 0
2/15

Airfasco Industries
Quality Assurance Representative:


T. West



1901 N. Narragansett Ave. • Chicago, Illinois 60639
773/804.0404 • Fax 773/804.0408
www.industeel.com
An ISO 9001 Certified Company

09/30/14

ISW Order/Invoice Number: 172668-01

SOLD TO: A3635
Airfasco Industries
2655 HARRISON AVE SW

SHIP TO: A3635
Airfasco Industries
2655 HARRISON AVE SW

CANTON OH 44706

CANTON OH 44706

CUSTOMER PO: 60345

2180ACPC

.2180"A4037 C/C ANNEALED ROD PHOS LUBE CLS

WEIGHT: 2998

HEAT NUMBER: C97211

CHEMISTRIES

C	Mn	P	S	Si
.390	.850	.009	.009	.009

PHYSICAL PROPERTIES

TENSILE: 68326... 73150.

TORSIONS:

ROCKWELL #1:

BENDS:

ROCKWELL #2:

SALT SPRAY HOURS:

YIELD STRENGTH: 000000/000000

COATING WEIGHT:

ELONGATION:

GRAIN SIZE:

REDUCTION OF AREA:

**** MERCURY FREE ****

***: SPECIFICATIONS ***

TARIFF:

AMS 6300 CHEM ONLY

NAFTA: B

ASTM F 2282-03

IFI 140

MELT: US UNITED STATES

ORIG: US UNITED STATES

MILL:

DFAR: Y

ROHS: Y


Rey Domingo, Quality Control Manager

Emerical

The values and specifications herein are passed through from the manufacturer directly to the customer.
Please see reverse side or www.industeel.com for all Terms and Conditions of Sale.
Material Properties Sheet 70403-MPS Version 1 Approved by BP 11/20/12

Certificat d'essai/Test Certificate

ArcelorMittal

Usine de Contrecoeur Est / Contrecoeur East works

5500 ARRODES

Vendu à - Sold to
INDUSTRIAL STEEL & WIRE COMPANY
OF ILLINOIS L.L.C.
1901 N. Narragansett
CHICAGO IL 60639
ETATS-UNIS

Expédié à - Shipped to
EMERALD STEEL PROCESSING
31650 Stephenson Highway
MADISON HEIGHTS MI 48071
ETATS-UNIS

No de com. No de bon de com.
Sale order Customer Order
113722 862227

Connaissement Date expé. Date du cert
Bill of lading Date shipped Certificate Date
80588683 2013/11/11 2013/11/11

No de Certificat
Certificate no
0000254482

Article Item	Description	No Matériel Material No	No pièce Part No	Poids expédié Weight	Couée Heat
000001	Cold Heading Qual WB, Green Rod ALLOY 4037, 0.217" - 5.90mm ALLOY 4037 ISW	21008572	0000000000	36,03758	C97211_01

ANALYSE CHIMIQUE-CHEMICAL ANALYSIS (%)

Couée/Heat:	C	Mn	P	S	Si	Cu	Al	Cr	Mo	V	Nb	ALT	Alc,
C97211_01	0.35	0.85	0.004	0.009	0.22	0.02	0.01	0.03	0.234	0.003	0.000	0.028	0.027
Couée/Heat:	N	Sn	Ti	B	Ca	Pb	As	Co	Sb	Bi	B.I.	C.E.	SDav
C97211_01	0.0022	0.001	0.001	0.0003	0.0019	0.000	0.001	0.003	0.000		1.75		

Remarques/Remarks:

The chemical analysis was performed at ArcelorMittal Montréal, Inc. laboratory, 3900 route des Acieries, Contrecoeur (Québec) J0L 1C0 Canada. The laboratory is accredited by SNQ according to ISO-17025 (certificate no 2701). The testing methods used by the laboratory are ASTM E415 and ASTM E1019.

Signature:

Métallurgie (A/Q)

Métallurgie (Q/A)

Michel Trudeau

1253

BRITE METAL

CERTIFICATION OF PROCESS

CUSTOMER: AIRFASCO INDUSTRIES, INC
2655 HARRISON AVE SW
CANTON OH 44706

**THIS IS TO CERTIFY THAT BRITE METAL INC. HAS PROCESSED THE FOLLOWING
MATERIAL IN ACCORDANCE WITH THE MOST WIDELY ACCEPTED
METALLURGICAL PROCEDURE.**

PO #: 62185 **WEIGHT:** 1607 LBS **NO. BINS:** 1 **NO. PCS:** 233,500
PN#: AN3-3A **LOT#:** 25531 **MATERIAL#:** 4037
BM ORDER NO: 170678 **CORE HARD SPECS:** HRC 28-32
PROCESS TO: AMS 2759
DATE RECEIVED: 10/07/2015 **DATE SHIPPED:**

HEAT TREATING TEST RESULTS

CORE HARDNESS: _____ **RC 29 / 30** _____
SURFACE HARDNESS: _____ **RC 29 / 30 @ .003** _____
CASE DEPTH: _____ **N/A** _____
CORE HARDNESS AS QUENCHED: _____ **N/A** _____

INSPECTOR: _____ **SK** _____

DATE: _____ **10-21-15** _____

Approved by Bruce Hogle
Revision Date: 2/13/2013

CERTIFICATE OF COMPLIANCE

SUPPLIER: **BERINGER PLATING, INC.**
1211 DeValera Ave.
Akron, OH 44310
330-633-8409 Fx 330-633-8447
sales@beringerplating.com

CUSTOMER: Airfasco Industries, Inc.

Beringer Invoice: 90480

P.O. Number: 62270

Part Number: AN3-3A

Lot Number: 25531-01

Lot Quantity: 233,500 pcs

Specification: Cadmium Plate per AMS-QQ-P-416D Type II, Class 2

Mercury Free Clause: No possibility exists for mercury contamination to occur during processing or testing of parts on this contract.

Coating Thickness: .0003 inches

Embrittlement Relief

Baked: N/A Hours at F Within 1 Hour of Plating.

Inspection Level to applicable standard:

S-3 of MIL.-STD.-105D:

4 %

ASTM B602 Table II:

1.50%

Aircraft Braking System:

1%

ACC. X

Certified By:

James Beringer Jr.

James Beringer Jr.
President

Date: 11/13/2015